Sound Advice: Recommended Equipment and Tips on Using Them

Richard Mekdeci, emPower Music & Arts

Imagine sitting on a splintery wooden pew through a Sunday service. It would be annoying, distracting, frustrating and often, painful!

That's what it can be like sitting through an hour of feedback, microphone cutouts, missing words, or a flat, "weak" sound.

Your congregation may be so used to it that they think it is fine, but the reality is, it is affecting their ability to fully experience the service you've prepared for them.

Any church, whatever your number or size sanctuary would find it worth the time and money to research the best sound system for your space and have an experienced audio tech train your team on how to use it.

If you do "church-in-a-box" you can find surprisingly powerful, portable sound systems that are easy to store and set up and under thousand dollars. Best Portable Sound Systems for Church

Mixing Boards (101)

- 1. If the speakers are the voice of the sound system, the mixing board/console is the heart.
 - The first thing is to decide on the size, or how many channels will you need.
- 2. A twelve-channel board would be minimum for even the smallest churches. Even if you currently just have the minister and a piano player, a 12-channel board will allow you to grow.
- 3. You need a channel for each speaker, each singer, and each instrument you utilize on Sunday mornings.
- 4. Look beyond your service needs and consider if you would ever host a PosiPalooza multi-artist concert or other music events, or host your local YOU'ers for a talent night.
- 5. If you find you may need more than 12 channels, mixing boards come in 16 to 48 channels and everything in between.
- 6. If you have a choir, dedicate at least two channels to them with their own choir microphones.
- 7. Add a channel for your CD or DVD player sound for playing movies or movie clips or YouTube videos.
- 8. A good mixing board will have plenty of "Outputs" which is the feature that sends the sound in the sanctuary "out" to your livestream feed, your service recording device, your website, or your overflow room or fellowship hall etc.

Analog or Digital

Most boards now are *digital* meaning they interface with Wi-Fi, computers, and streaming platforms. They can memorize settings for instant recall. Some even have recording capabilities.

If you're tight on space, digital mixing boards are usually much smaller than analog

boards.

Digital mixing boards have a much steeper learning curve than the traditional analog boards.

They also tend to be quite a bit more expensive than analog boards.

We recommend using analog boards for the small, minimal needs ministries as these are easier to learn and operate.

Here are some helpful articles in helping you to choose the best mixing board for your ministry.

<u>Top 10 Digital Mixers of 2024</u> Best Audio Consoles for Churches 2023

Microphones

Microphones can be purchased as wired, wireless or wireless headsets depending on your minister and the size of your platform and music team.

Wired

Wired microphones are more dependable, less expensive generally and they don't require batteries. Use them in places where your microphone is stationary most of the time such as at the podium, the piano, or for band members who sing and are in the same spot each week, or for micing drums and amps. They are generally placed in a microphone stand while being used.

Wireless Handheld

A handheld wireless microphone is your most versatile. It allows you to have classes where you can pass the mic around to attendees for sharing. The speaker can move around when they speak, and microphones can be easily moved and shared without worrying about clumsy cables.

Wireless handhelds depend on batteries being fully charged and on their own frequency to prevent interference from other wireless sources.

Wireless Headset

The difference between a headset and a lavalier microphone is that lavaliers are stationary attached to your collar or lapel so the signal may be weaker if the users turn their heads while speaking. They are also prone to extraneous sounds of a jacket or shawl rubbing against it.

A headset mic puts the mic on the face or cheek of the user so that the user has more freedom of movement when speaking. They will attach to a harness that goes over the ears like glasses, or a single hook over one ear. They are meant to be very small, flesh-tone and less conspicuous than a handheld or lapel microphone.

This microphone should be dedicated to your minister and minister only so that adjustments don't need to be made each Sunday for fitting and sound.

This is why I believe every church should have at least two headset microphones in case there are guest speakers who would like a headset.

Every ministry is different. This link is pretty comprehensive and covers all varieties of microphones for church use:

Best Microphones for Church Choir

In addition to your speakers, mixing board and microphones, you'll need a few other things have on hand:

Direct Boxes

Often abbreviated DI (for direct insertion), a direct box, is commonly used to convert high impedance unbalanced signals from a stage instrument like a bass or keyboard which uses the ¼' "guitar cables" into a low impedance balanced signals such as microphone cables. It also allows the signal to be transmitted over long lengths of cable. They are used in larger rooms to get a signal out of an instrument on stage out to the mixing board, which can be at the back of the sanctuary. They may also have some combination of ground lift switches, equalization switches, level matching switches, isolated line outputs, and more.

Direct Boxes are not expensive and come in handy if you have a guest guitar player, or someone who brings their own keyboard to perform.

Microphone Cords

Twenty-foot mic chords are usually plenty if you are running into a direct box. Microphone cables can be easily connected to create longer cords if needed so always have a couple extra for those times or if one breaks.

The Snake

The snake basically, takes the channels from your board and brings them all up to the stage. This is one large cord that runs from your mixing board to the stage so you can plug your microphone cords into it instead of running all your cords back to the mixing board.

A snake run to your stage would replace the Direct Boxes. Even with a snake, it is wise to have a couple of direct boxes on hand.

If you are building your church, you would run the snake through conduits under the floor so it would be invisible.

Snakes are generally needed in medium to larger sanctuaries.

Your Sound Techs

Running a mixing board is not rocket science but it does require your sound person to be discernable as to what sounds "real" and what sounds more like a transistor radio!

1. A good sound tech always has his attention on the podium and is ready to mute and unmute microphones at the proper time (if needed).

- 2. The most blaring evidence of inexperienced sound techs is missing cues. The person starts speaking, the mic is not on, they inevitably tap the mic saying, "Is this thing on?", everyone turns around to look at the sound tech who is on their cell phone or playing games on their iPad. Very unprofessional!
- 3. Your sound tech needs to have a basic understanding of frequencies and what causes feedback so he or she can prevent or quickly solve problems.

Train Your Sound Techs

If you are using volunteers or inexperienced sound techs, **HIRE A PROFESSIONAL** to train your entire team. This would be \$200 - \$300 dollars well spent.

Sound Check

Sound check is the most important preparation for your morning service. Making sure all mics are working and not feeding back and the volume is balanced and equalized for the most realistic sound, is the final "buffing and polishing" to display the full capabilities of your new sound system.

- 1. Make sure that the sound person is available for the entire rehearsal time of the music team or special guest musician. Musicians need to be able to hear one another and will ask for a certain mix in the monitors. Mics need to be checked and balanced and the sound tech needs to know when the singers are singing.
- 2. Once a good sound check is accomplished, it is not necessary to be constantly moving sliders and dials. There should be very little to do during the actual service. The sound tech is most successful when no one in the congregation thinks about the sound system for the entire service. It's like women's makeup—it should enhance but not be noticeable!

I hope this has been helpful. Feel free to contact me at Richard@empowerma.com if you have any questions, comments, or corrections.